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Investigating the Psychosomatic Effects of Stress: A Population-Based Study from Chennai, India

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Abstract Stress has become an increasingly pressing concern in modern urban societies, with significant implications for both physical and mental health. This study explores the multifaceted impact of stress among individuals residing in Chennai, focusing on how demographic factors such as gender, age, education, occupation and living area influence stress responses and health outcomes. The research aims to analyses behavioral, psychological and physical manifestations of stress, as well as common coping strategies adopted by the urban population. Using a quantitative, empirical approach, primary data were collected from a total of 426 respondents selected through judgmental sampling. A structured questionnaire served as the primary tool for data collection, capturing both subjective perceptions and measurable experiences of stress. The independent variables included gender, age, education, occupation and living area, while the dependent variables comprised indicators such as stress's effect on concentration, sleep, eating habits, physical symptoms and mental health. Descriptive statistics, bar and pie charts were used to visualize trends and Chi-square tests were employed to assess the significance of relationships between variables. The results revealed that stress significantly affects the cognitive and physiological well-being of individuals, with notable variations based on gender and living area. A higher proportion of male respondents reported seeking professional help, while more females exhibited behavioral symptoms such as emotional eating and disrupted sleep patterns. Urban respondents demonstrated heightened stress manifestations, particularly headaches and difficulty concentrating, compared to their rural counterparts. Statistically significant relationships were observed between gender and multiple stress indicators ($p < 0.05$), validating the alternative hypothesis. The findings underscore the complexity of stress as a public health issue and point toward the necessity of tailored, demographically sensitive interventions. Limitations of the study include the use of judgmental sampling and self-reported data, which may affect generalizability. Nonetheless, the study contributes valuable insights into stress management in urban India and emphasizes the importance of proactive mental health strategies.

Key Words Stress, Urban Health, Physchosomatic Disorders, Health Psychology, Public Health, Stress Management, Mental Health, Sleep Quality, Quality of Life, Chennai

INTRODUCTION

Stress, a complex and multifactorial phenomenon, has emerged as a critical public health concern with far-reaching implications for both physical and mental well-being. Originating from early physiological explorations such as Walter Cannon's seminal work on the "fight-or-flight" response, the understanding of stress has evolved into a multidisciplinary domain intersecting neuroscience, psychology, public health and behavioral medicine. Contemporary research underscores that stress is not merely an emotional state but a biopsychosocial process capable of disrupting homeostasis and precipitating a cascade of physiological and psychological consequences.

Prolonged or chronic stress is now widely recognized as a contributing factor to a range of somatic diseases, including cardiovascular conditions, endocrine dysfunctions, metabolic syndromes and immunosuppressive disorders. Simultaneously, the psychological burden of stress has been implicated in the onset and progression of mental health conditions such as depression, anxiety, post-traumatic stress disorder (PTSD) and cognitive decline. These associations underscore the bidirectional and synergistic relationship between stress and health, demanding a holistic, integrated approach to research and intervention.

Environmental and societal transformations-urbanization, digital dependency, occupational pressures and socio-economic disparities-have intensified exposure to stressors across all age groups and demographics. In India, specific stressors such as rapid urban development, inadequate access to mental health services and cultural

stigma further compound the burden, particularly in under-resourced communities. The Indian government has initiated multiple strategies to address this growing crisis through policy frameworks and health programs, including the National Mental Health Programme (NMHP), District Mental Health Programme (DMHP), Rashtriya Kishor Swasthya Karyakram (RKSK) and the National Health Mission (NHM). The Mental Healthcare Act of 2017 and organizational support systems such as Employee Assistance Programs (EAPs) also reflect a systemic commitment to mental well-being.

Contemporary stress research is now oriented toward both curative and preventive paradigms. Workplace interventions, mindfulness-based therapies and population-specific strategies have demonstrated efficacy in mitigating the impact of stress. Emerging trends advocate for the integration of stress management into primary care and educational curricula, with a growing emphasis on resilience-building, emotional regulation and mental health literacy.

Comparative global perspectives reveal varying stress-health dynamics. In the United Kingdom, high-pressure work environments have led to increased incidence of burnout and psychosomatic illnesses, despite relatively better access to mental health services. In Russia, cultural stigma and healthcare limitations hinder adequate stress intervention, especially outside urban centers. India presents a hybrid scenario: while awareness is increasing, systemic gaps persist, particularly in rural and marginalized populations.

Given this backdrop, the present study employs a quantitative approach to investigate the multidimensional impact of stress on both physical and mental health within the context of Chennai. The study aims to elucidate correlations, highlight epidemiological patterns and contribute to the evidence base necessary for informed health policymaking and targeted intervention strategies.

Objectives

- To investigate the prevalence and impact of stress-related disorders on mental health
- To examine the correlation between stress levels and physical health outcomes
- To promote awareness and education about the importance of managing stress for overall health and quality of life

REVIEW OF LITERATURE

The impact of stress on physical and mental health has been explored extensively across various populations, particularly among students and working professionals, revealing both acute and chronic health outcomes.

Ullah [1] conducted a study focusing on the psychological consequences of drone strikes in conflict zones, revealing that a high proportion of students suffered from psychological, psychiatric and medical issues due to persistent insecurity. This stress-induced environment also led to declining academic performance and increased susceptibility to extremist sympathies, demonstrating how external stressors can deeply affect mental resilience in high-risk populations.

In the context of academic life, Kaur and Bashir [2] emphasized the importance of mental fitness alongside physical health. Her study underscored that sound mental health is foundational to coping with daily challenges, maintaining creativity and navigating personal and professional adversity-essential elements for academic success and psychological well-being.

Gopalan *et al.* [3] underscores how chronic exposure to unhealthy food consumption patterns can significantly impair physical health. It aligns with this study's finding that stress often leads to maladaptive coping mechanisms, such as overeating or reliance on comfort foods, especially among urban respondents. The connection between food safety, public behavior and stress-eating behaviors bridges the themes of health vulnerability and psychological response, thereby enriching the discourse on how stress manifests physically.

Expanding on awareness levels, Islam and Rakib [4] conducted a quantitative survey at Khulna University to assess mental health awareness. With 87.1% of respondents identifying mental disorders as a disease and 84.3% acknowledging awareness, the study highlighted a promising, albeit partial, shift in perception toward mental health literacy among young adults.

Matani [5] focused on disseminating empirical evidence to university stakeholders, advocating for institutional interventions that enhance academic environments. The research encouraged increased awareness and a proactive approach to creating supportive academic ecosystems.

Workplace mental health was explored by Valeria [6] through a qualitative study on library staff in Tanzania. The findings suggested that limited awareness of mental health challenges significantly impairs job performance, reinforcing the necessity of organizational-level stress intervention programs.

Upadhyaya [7] compared academic stress among students in private versus public schools, revealing that students in private institutions experienced more academic pressure but also exhibited higher mental health status. The study affirmed a statistically significant correlation between academic stress and mental health outcomes, highlighting the nuanced relationship between institutional settings and psychological stress.

Gopalan *et al.* [8] examined the public's perception of educational reforms and demonstrated how policy transitions induce mental stress among students and educators alike. The findings offer valuable insight into how policy-induced uncertainties contribute to psychological stress, which supports the present research in contextualising stress-related triggers within professional and educational settings. The responses collected in this study, particularly from postgraduate and undergraduate respondents, align with those sectors most affected by such systemic changes.

The behavioral consequences of stress were further explored by Karel [9], who investigated the link between

academic stress and physical activity among adolescents in Central Europe. Findings suggested that reduced physical activity during recess correlated with elevated stress levels, implying the importance of physical engagement in stress modulation.

Technological innovations in mental health support were emphasized in Elisabeth [10], who documented the growing effectiveness of digital therapies, such as AI-driven chatbots and life-crafting interventions. These tools demonstrated potential in both alleviating mental distress and improving academic outcomes.

McCloud and Bann [11] conducted a systematic review to explore the impact of financial stress on student mental health in the UK. The review revealed a consistent association between economic insecurity and mental health deterioration, indicating that financial vulnerability is a prominent stressor among higher education students.

In a gender-based study, Shahzaib [12] used standardized instruments to assess stress and physical activity among MBBS students. The study found a significant relationship between gender and academic performance, with female students showing higher academic success despite elevated stress levels, suggesting resilience disparities.

Physiological consequences of stress were examined in Thomas [13], who identified major disruptions in primary physiological systems-including endocrine and immune responses-caused by prolonged stress exposure.

Deb *et al.* [14] identified critical psychosocial factors that warrant deeper investigation for their role in elevating stress, especially in academic contexts, emphasizing the need for preventive frameworks.

Exploring associations in a clinical context, Ebrahim [15] conducted a large cross-sectional study among medical students in Saudi Arabia. Stress levels showed a clear association with academic performance and major stressors included workload and fear of failure.

Addressing cultural dimensions, Downs [16] critiqued conventional psychological research for its limited cultural adaptability, advocating for inclusive methodologies that better reflect diverse stress experiences across populations.

Nadri [17] explored the correlation between mental health and academic performance in athletic and non-athletic university students, reinforcing that physical engagement may mediate stress effects on academic outcomes.

Hasin [18] proposed using robust statistical methods to explore causal links between job stress and health outcomes, suggesting a mediational model that could clarify direct and indirect effects of stress.

Vandana *et al.* [19] contributes directly to the current study's findings where respondents, especially males, reported listening to soothing music as a preferred stress management strategy. The study highlights music therapy as a scientifically supported intervention for reducing cortisol levels and improving mood, which provides empirical backing for lifestyle-based coping mechanisms discussed in the present research. It affirms the therapeutic value of non-pharmacological interventions in stress management.

Focusing on urban women, Johari [20] reported a quantifiable inverse relationship between stress and physical/psychological health in Delhi, with each unit increase in stress correlating to a 0.756 unit decline in overall health. The findings urged familial and societal support systems to enhance treatment effectiveness.

The intersection of stress and cardiovascular health was discussed by Sara *et al.* [21], who identified psychosocial stress as a significant non-conventional risk factor for heart disease. Despite advancements, measurement techniques and intervention strategies remain underdeveloped, warranting further exploration.

The importance of individual coping capacities was discussed by Upadhyaya [7], who highlighted the biological underpinnings of the stress response and the role of resilience and emotional regulation in mitigating its effects.

Finally, Hašková [22] emphasized that both physical and psychological stress are inherent in professional environments and may manifest acutely or chronically, depending on muscular effort, workload and ergonomic conditions.

METHODS

This study employs a quantitative empirical research design to investigate the multifaceted effects of stress on both physical and mental health among individuals residing in Chennai, India. Recognizing the growing concern around psychosocial stressors in rapidly urbanizing settings, particularly in metropolitan areas like Chennai, the research aims to provide evidence-based insights into stress determinants, consequences and potential interventions. The study is cross-sectional in nature and utilizes primary data collection through a structured questionnaire.

Research Design and Approach

The research is framed within the positivist paradigm, which emphasizes objectivity, quantification and statistical analysis to test hypotheses and identify patterns. A descriptive-analytical approach was adopted to systematically capture the socio-demographic and psychological variables influencing stress outcomes. The study also incorporates hypothesis testing to examine associations between demographic variables and self-reported stress-related outcomes.

Study Area and Population

The study was conducted within the geographical limits of Chennai, a densely populated urban centre in South India, known for its socio-economic diversity. The population of interest includes working professionals and students across different age groups, who are currently living in urban, semi-urban or suburban areas within Chennai.

Sampling Technique and Sample Size

A Judgemental sampling method was employed for data collection due to its feasibility and the wide geographical spread of the target population. The total sample size was 426 respondents, a figure determined based on time and resource constraints but sufficient for meaningful statistical

analysis. The respondents were selected to reflect a balance of age groups, gender identities, occupational roles and educational backgrounds.

Instrumentation

Structured Questionnaire: The primary instrument for data collection was a structured, close-ended questionnaire, meticulously designed to capture a range of variables relevant to the study. The questionnaire was divided into three key sections, namely demographic profile which includes Gender, Age, Area of residence (Urban, Semi-Urban, Suburban), Educational qualification, Occupational status; Stress Impact Variables includes "To what extent does stress affect your ability to concentrate?", "Have you experienced sleep disturbances due to stress?", "Do you feel socially withdrawn when stressed?". The questionnaire also included Psychosocial and Behavioral Dimensions assessing stress-related coping mechanisms, perceived effectiveness of support systems and awareness of mental health interventions.

Responses were collected using Likert-scale items, multiple-choice questions and matrix rating scales. The design of the instrument was informed by previous validated tools and adapted for regional cultural relevance.

Data Collection Procedure

Data collection was conducted over a period of two months. Respondents were briefed about the purpose of the study and provided informed consent prior to participation. Anonymity and confidentiality were maintained throughout the process in accordance with ethical research standards.

Data Analysis Techniques

The collected data were analyzed using a combination of descriptive and inferential statistical methods. The descriptive analysis included Bar charts and pie charts were employed to depict frequencies and proportions related to demographic characteristics and stress outcomes. The Inferential Analysis included Chi-Square Test of Independence was used to test the hypothesis regarding the association between demographic variables and perceptions of stress.

Hypothesis Tested

- **Null Hypothesis (H_0):** There is no significant relationship between gender and the opinion of respondents on whether stress impacts the ability to concentrate and focus on tasks.
- **Alternative Hypothesis (H_1):** There is a significant relationship between gender and the opinion of respondents on whether stress impacts the ability to concentrate and focus on tasks

The Chi-Square test was selected due to the categorical nature of the independent (gender) and dependent (opinion on concentration) variables. The results of the test were interpreted at a 95% confidence level ($p<0.05$) to determine statistical significance.

RESULTS

The results are categorised below as Demographic Profile of the respondents, Gender-Based Comparative Analysis on Stress-Related Variables, Residential Area-Based Comparative Analysis on Stress-Related Variables and Hypothesis Testing via Chi-Square Analysis.

Demographic Profile of Respondents

The study involved 426 respondents who were selected from various urban and semi-urban locations in Chennai using a judgemental sampling method. This sample size was deemed representative for the study's objectives, offering a balanced overview of the population under consideration. The demographic characteristics of the respondents were examined in terms of gender, age, education, occupation and residential area.

The gender distribution revealed that 47.89% of the respondents were male, while 51.64% were female, resulting in a near-even gender split with a slight majority of females. This distribution reflects a balanced gender representation and offers valuable insights into gender-based differences in stress perceptions and experiences.

The age distribution of respondents varied significantly, with the largest proportion of participants aged between 31 to 40 years (40.85%), followed by 34.27% aged 21 to 30 years. Respondents aged below 21 years comprised 13.15%, while 11.27% were aged 41 to 50 years. Notably, no participants were aged above 50, which may reflect the study's focus on younger and middle-aged working adults, who are often more susceptible to work-related stress.

In terms of educational background, 46.48% of respondents held an undergraduate degree and 29.11% held a postgraduate qualification, making education an important factor in the study. 10.80% of respondents reported having no formal education, while 6.57% each had primary or secondary education, indicating a diversity of educational backgrounds among participants.

Regarding occupation, the largest group of respondents were employed in the private sector (40.85%), followed by 32.39% who were unemployed. 14.08% were self-employed and 12.21% worked in the public sector. These occupational categories were essential for exploring the relationship between stress and employment status.

Finally, the majority of respondents resided in urban areas (80.75%), with a smaller proportion residing in rural areas (18.78%), emphasizing an urban focus for the study's findings.

Gender-Based Comparative Analysis on Stress-Related Variables

The study further analyzed stress-related factors across gender to identify potential differences in how males and females experience and manage stress.

When respondents were asked whether stress impacted their ability to concentrate and focus on tasks, 20.66% of male respondents indicated a direct "yes," whereas 25.82% of female respondents selected "maybe." This suggests that female respondents may perceive a more nuanced or uncertain relationship between stress

and cognitive performance, whereas males reported more certainty in the effect of stress on concentration.

In terms of seeking professional help or counseling to manage stress, the data revealed that 29.58% of male respondents had sought professional assistance, contrasting with 45.07% of females, who indicated that they had not. This discrepancy highlights a gender-based difference in the willingness or opportunity to access professional mental health services.

The impact of stress on sleep patterns was also explored, with 28.17% of male respondents affirming that stress affected their sleep, while 51.64% of females reported no such effect. This suggests that females may be more likely to experience sleep disturbances associated with stress, while a significant portion of males did not perceive such disruptions.

When respondents were asked how stress manifests physically, 27.70% of males reported experiencing headaches, while 23% of females similarly identified headaches as a physical symptom. This indicates that both genders are similarly affected by stress physically, though the exact prevalence may vary.

In exploring effective ways to reduce stress, male respondents preferred regular exercise and listening to soothing music (20.66%), while females favored a balanced diet (25.82%). These findings suggest that males may favor more active coping strategies, while females may focus more on dietary habits.

When examining changes in eating habits due to stress, 26.76% of male respondents reported no significant change, in contrast to 45.07% of females, who admitted to overeating or consuming comfort foods. This highlights a stronger emotional eating tendency among females when under stress.

Finally, the study assessed the mental health conditions most commonly associated with stress. For males, 29.58% identified traumatic stress as a major concern, while 25.82% of females highlighted depression. This suggests gender-specific psychological outcomes of stress, with males possibly experiencing more trauma-related stress and females more depressive symptoms.

Residential Area-Based Comparative Analysis on Stress-Related Variables

The study also analyzed stress-related experiences based on living area, comparing urban and rural respondents to assess differences in stress perception, management and coping strategies.

When asked whether stress impacted their ability to concentrate, respondents from rural areas were more likely to answer "yes" (12.21%), whereas 30.52% of urban respondents answered "maybe." This suggests that while urban respondents may be more uncertain or ambivalent about the cognitive impacts of stress, rural respondents may experience more direct cognitive effects.

In terms of seeking professional counseling for stress, a significant number of urban respondents (33.33%) reported not seeking help, similar to the 12.21% of rural respondents who also avoided professional assistance. These findings reflect a broader trend of limited mental health service utilization, particularly in rural areas.

The impact of stress on sleep patterns showed that 41.31% of urban respondents reported no effect, as opposed to 18.76% of rural respondents. This disparity may indicate differences in lifestyle, access to healthcare or awareness of sleep disturbances caused by stress in urban versus rural settings.

When investigating how stress manifests physically, 38.50% of urban respondents reported experiencing headaches, compared to only 12.21% in rural areas. This suggests that urban respondents may be more attuned to the physical effects of stress or have higher levels of stress-related symptoms.

In terms of effective stress reduction techniques, 31.46% of urban respondents preferred regular exercise, while 12.21% of rural respondents favored a balanced diet. This suggests that urban respondents may have greater access to fitness resources, whereas rural participants focus more on dietary adjustments to manage stress.

Regarding eating habits, 33.33% of urban respondents admitted to overeating or indulging in comfort foods under stress, compared to 12.21% of rural respondents. This highlights a potentially stronger association between stress and emotional eating in urban populations.

Finally, when asked whether mindfulness or meditation could improve physical and mental health, 30.99% of urban respondents were neutral, while 18.78% of rural respondents agreed with the statement. This reflects a potential difference in the acceptance or practice of mindfulness between urban and rural populations.

Hypothesis Testing via Chi-Square Analysis

To examine the statistical relationships between key stress-related factors and demographic variables, Chi-square tests were employed. The following results were obtained:

For gender and the impact of stress on concentration, the null hypothesis was rejected, confirming a significant relationship between gender and the perception of stress affecting focus. Similarly, the null hypothesis was rejected for the relationship between gender and seeking professional help for stress, indicating that gender influences the likelihood of seeking mental health assistance.

Furthermore, when investigating gender and the impact of stress on sleep patterns, the null hypothesis was again rejected, suggesting a significant relationship between gender and the perception of stress affecting sleep. These results highlight important gender-based differences in the perception and management of stress, which can inform targeted interventions and support services.

DISCUSSION

The demographic profile of the respondents presents a balanced representation across gender, with 47.89% male and 51.64% female participants. This near-equal gender

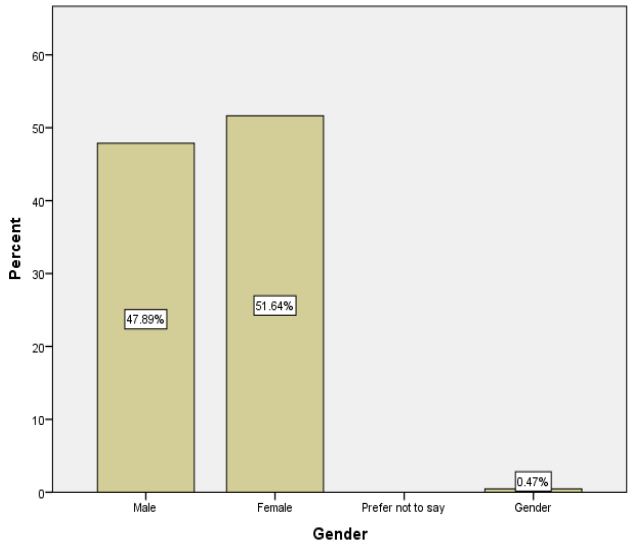

Figure 1: The gender of the respondents

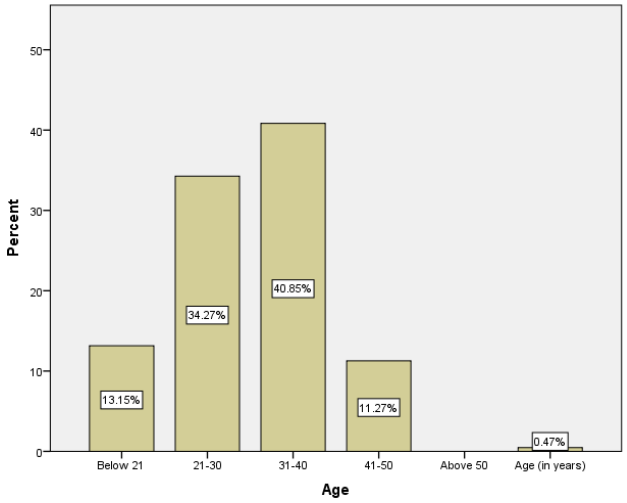

Figure 2: The age of the respondents

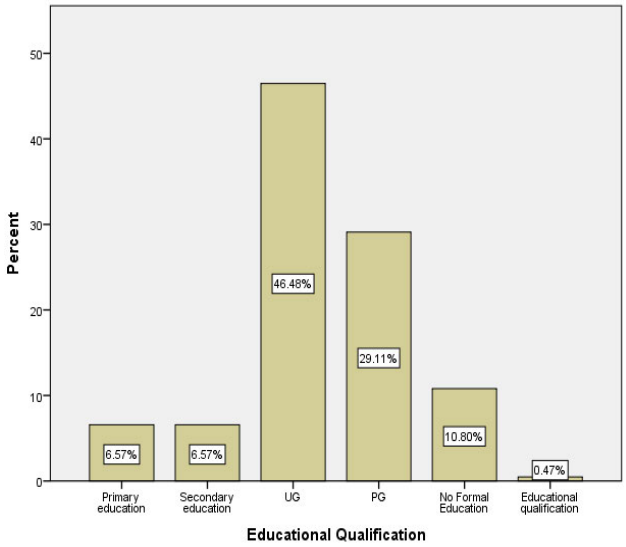

Figure 3: The educational qualification of the respondents

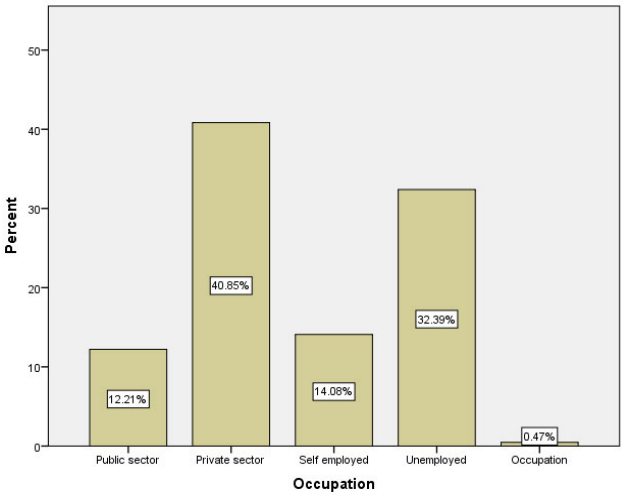

Figure 4: The educational Occupation of the respondents

distribution offers a valuable foundation for comparative analysis and helps ensure that the findings reflect diverse gender-based perspectives on stress and its impacts (Figure 1).

The age distribution of respondents indicates that the majority fall within the 31-40 age group (40.85%), followed by 21-30 (34.27%), reflecting a concentration of working-age adults who are likely to experience occupational, familial and social stressors (Figure 2). The representation of younger and middle-aged participants is significant as this cohort is often exposed to high levels of urban and professional stress.

A notable majority of the respondents are well-educated, with 46.48% holding undergraduate degrees and 29.11% holding postgraduate qualifications. This educational distribution suggests a respondent group that is likely aware of stress, its symptoms and coping mechanisms (Figure 3). The presence of participants with no formal education (10.80%) and primary or secondary education (13.14%) also ensures the inclusion of perspectives from lower educational strata, enriching the data with diverse cognitive and experiential responses.

In terms of occupation, 40.85% of respondents were employed in the private sector, followed by 32.39% unemployed, 14.08% self-employed and 12.21% in the public sector (Figure 4). The dominance of private sector employment suggests that work-related stress could be a prominent factor. The high rate of unemployment is also noteworthy, as it may introduce different stress dynamics related to financial insecurity and social pressures.

A large portion of the sample (80.75%) resides in urban areas, while only 18.78% are from rural settings (Figure 5). This urban skew allows for insights into the fast-paced, competitive lifestyle prevalent in metropolitan regions like Chennai, often associated with heightened stress levels. However, the rural responses provide a critical comparative lens for understanding environmental and lifestyle-based differences in stress perception and management.

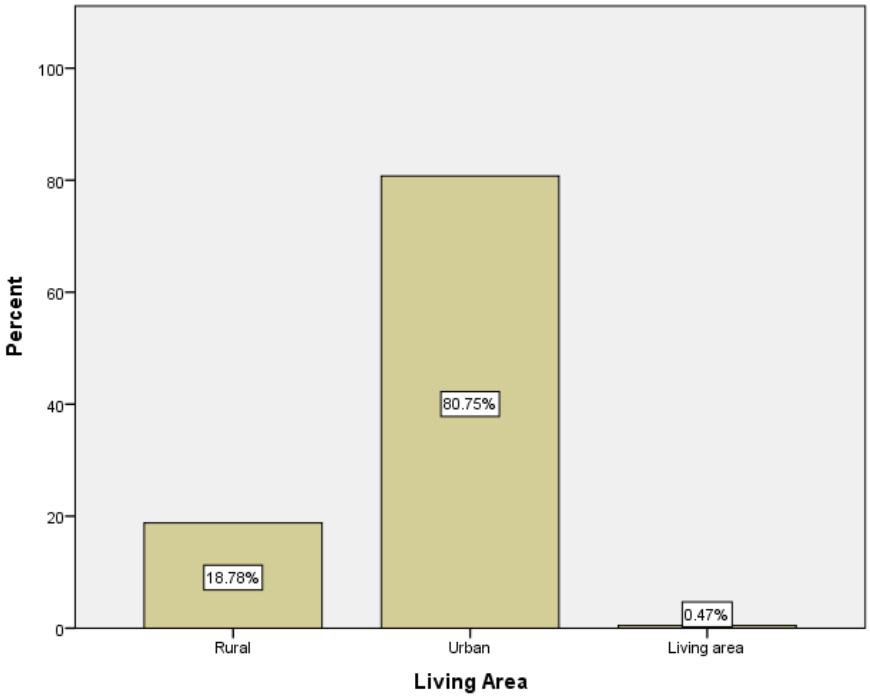

Figure 5: The Living area of the respondents

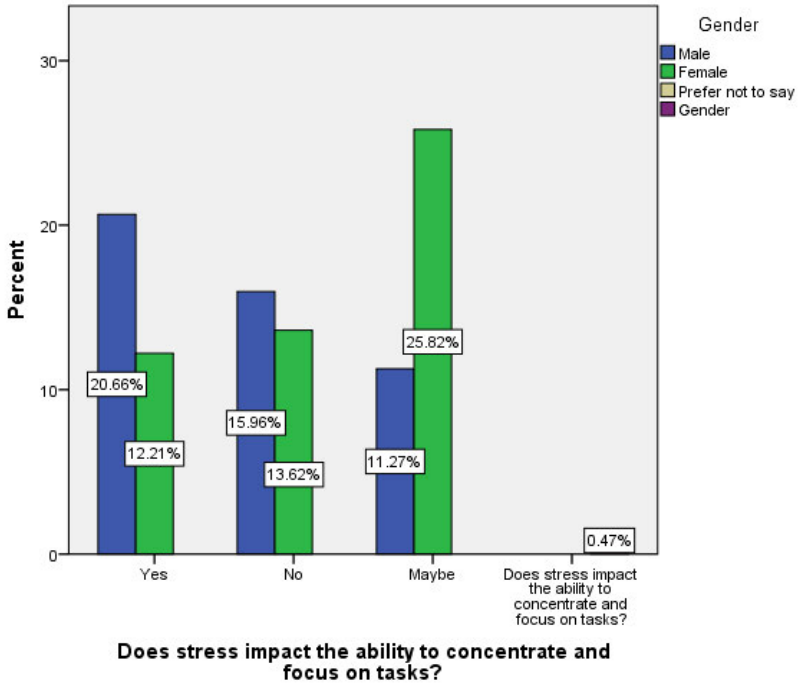

Figure 6: The comparison between gender and the opinion of the respondents on does stress impact the ability to concentrate and focus on task

Gender-Based Analysis

When examining the relationship between gender and the impact of stress on concentration, 20.66% of male respondents affirmed that stress affects their ability to focus, while 25.82% of female respondents indicated a "maybe" response (Figure 6). This suggests that although both genders acknowledge stress-induced cognitive interference, females might experience or express this impact with more ambiguity or situational variance.

Interestingly, 29.58% of males reported having sought professional help for managing stress, compared to a higher percentage of females (45.07%) who reported not seeking

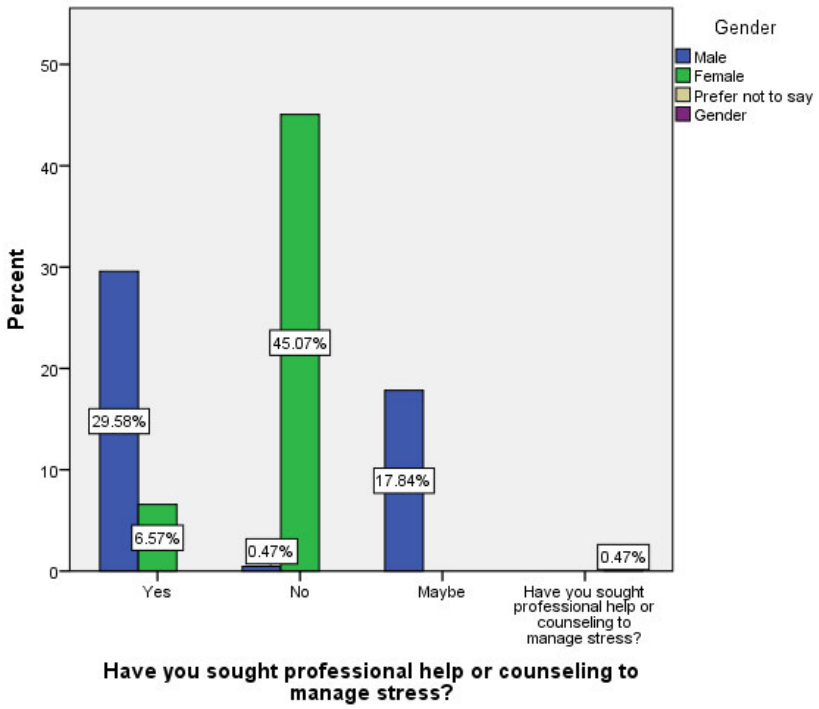

Figure 7: The comparison between gender and the opinion of the respondents on have you sought professional help or counselling to manage stress

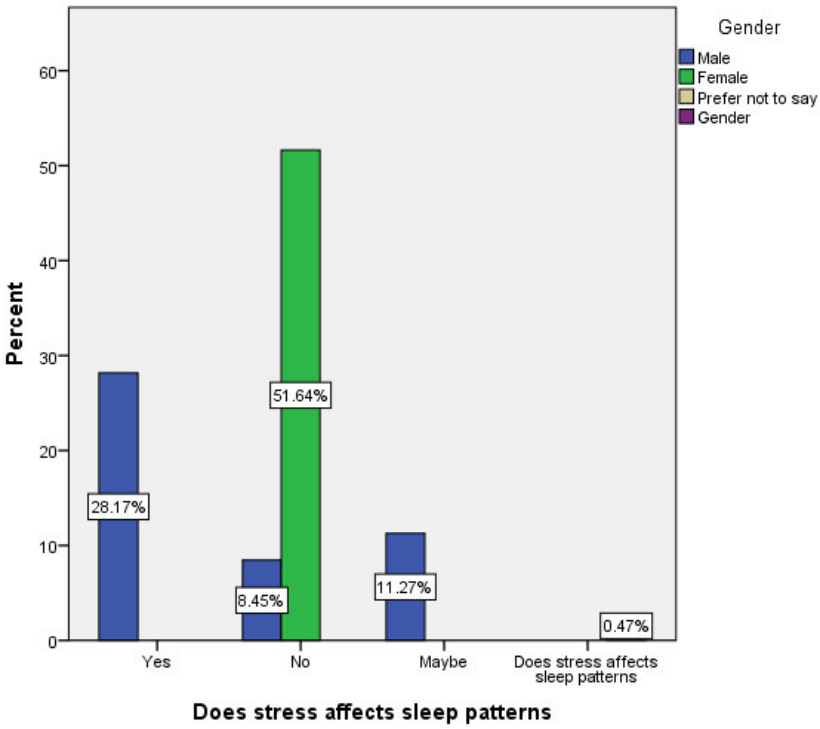

Figure 8: The comparison between gender and the opinion of the respondents on does stress affects sleep patterns

help (Figure 7). This trend may reflect gender-based barriers to accessing mental health services, such as stigma, economic constraints or differences in perceived need.

In relation to sleep patterns, 28.17% of males reported that stress affected their sleep, whereas 51.64% of females stated otherwise (Figure 8). This divergence could suggest either greater sleep resilience among females in this sample or a tendency to underreport sleep disturbances.

Physical manifestations of stress such as headaches were common across both genders, with 27.70%

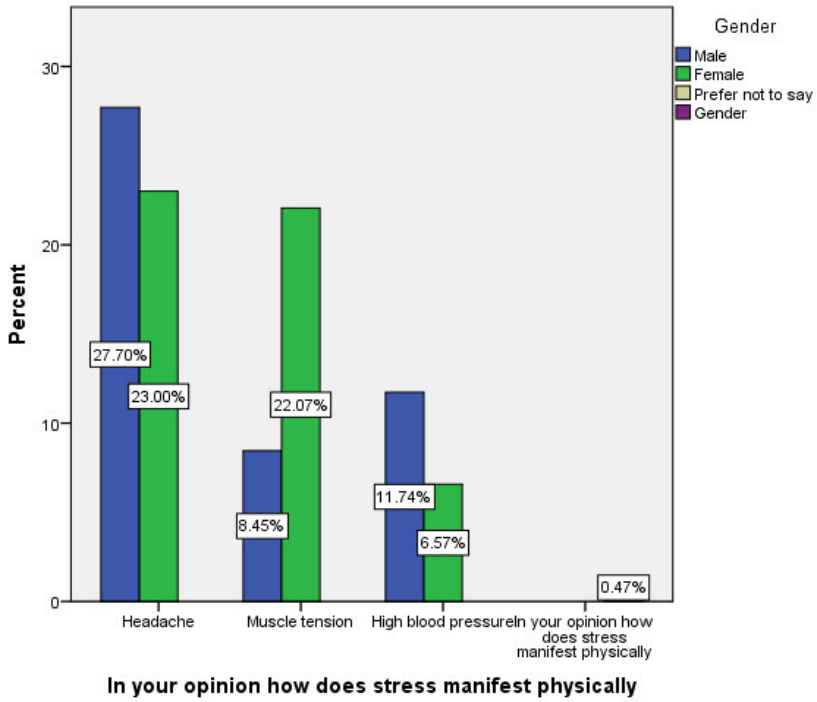

Figure 9: The comparison between gender and the opinion of the respondents on In your opinion how does stress manifest physically

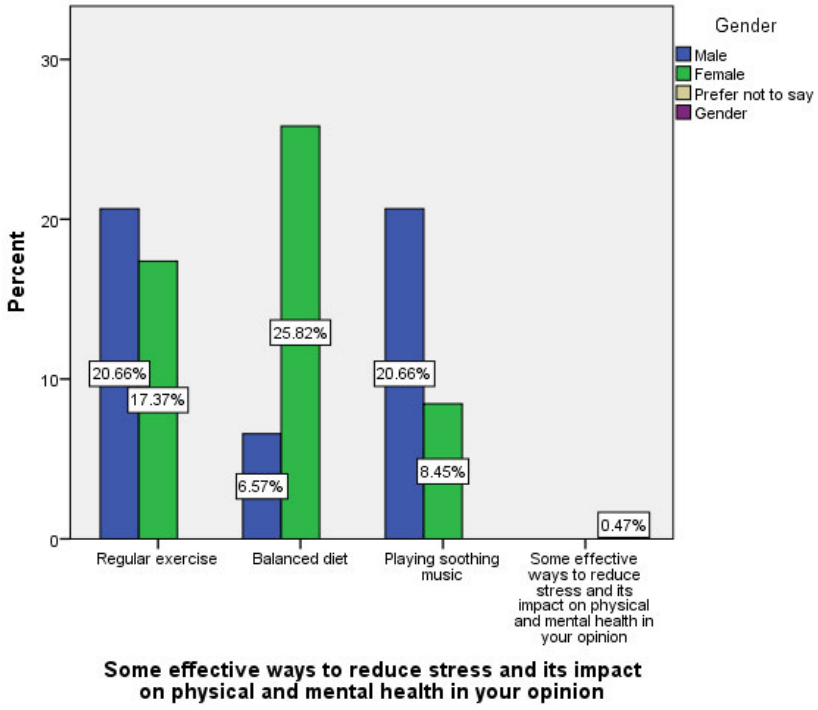

Figure 10: The comparison between gender and the opinion of the respondents on some effective ways to reduce stress and its impact on physical and mental health in your opinion

of males and 23% of females citing headaches as the primary symptom (Figure 9). This consistency points to the universality of certain stress symptoms regardless of gender, though the underlying causes and intensities may vary.

When asked about stress reduction strategies, males were more inclined towards regular exercise and soothing music (20.66%), whereas females favored a balanced diet (25.82%) (Figure 10). This suggests gendered preferences in coping mechanisms, where

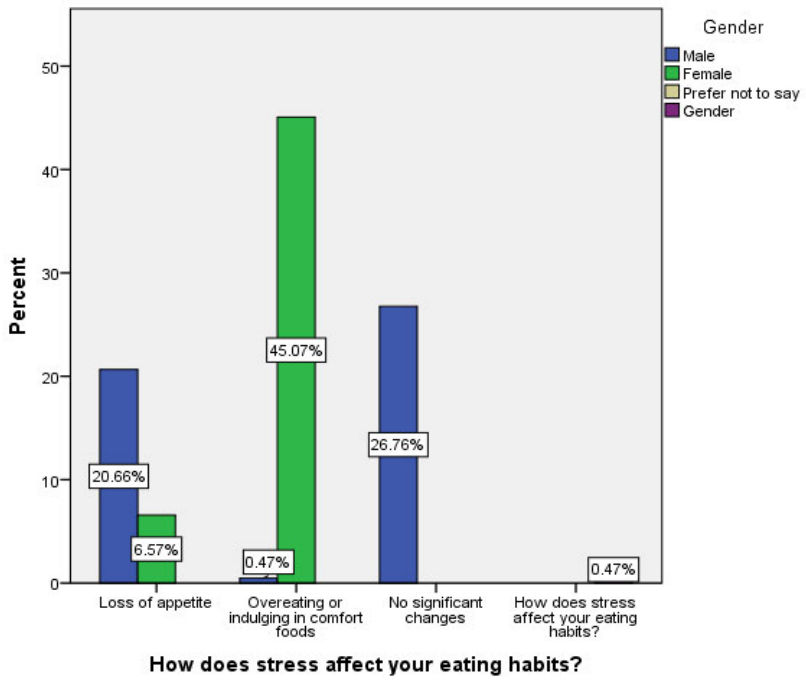

Figure 11: The comparison between gender and the opinion of the respondents on how does stress affects your eating habits

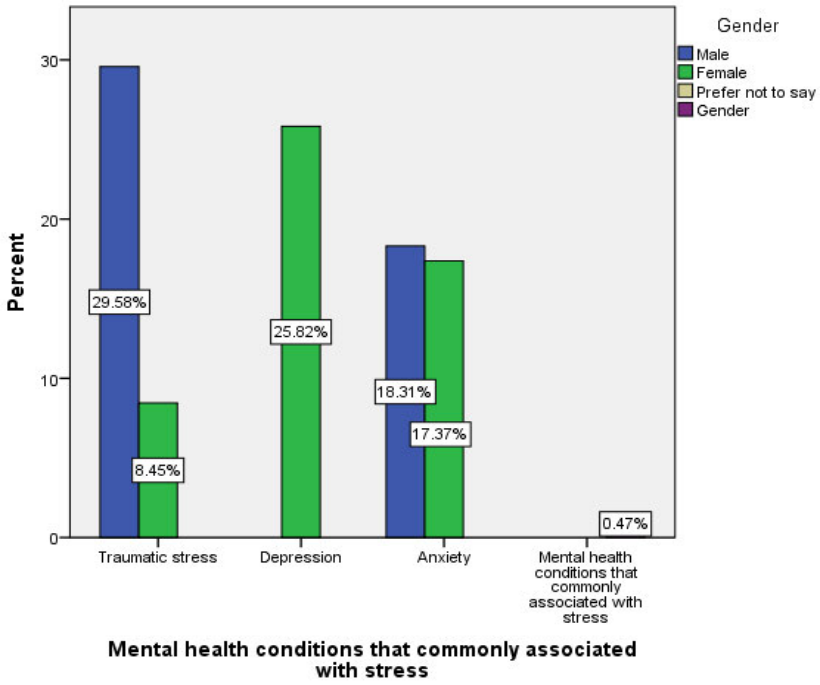

Figure 12: The comparison between gender and the opinion of the respondents on mental health conditions that commonly associated with stress

males may lean towards physical and behavioral methods and females towards lifestyle or dietary changes.

In terms of eating behaviors, 26.76% of males reported no significant change due to stress, while 45.07% of females reported overeating or indulging in comfort foods (Figure 11). This may indicate that emotional eating is more prevalent among females, possibly due to socio-cultural or hormonal factors influencing stress-related food consumption.

Regarding mental health conditions associated with stress, males predominantly reported traumatic stress (29.58%), while females indicated depression (25.82%) as a more common outcome (Figure 12). These findings align with existing literature that identifies gender-specific patterns in stress responses, with men more prone to externalizing symptoms and women to internalizing conditions.

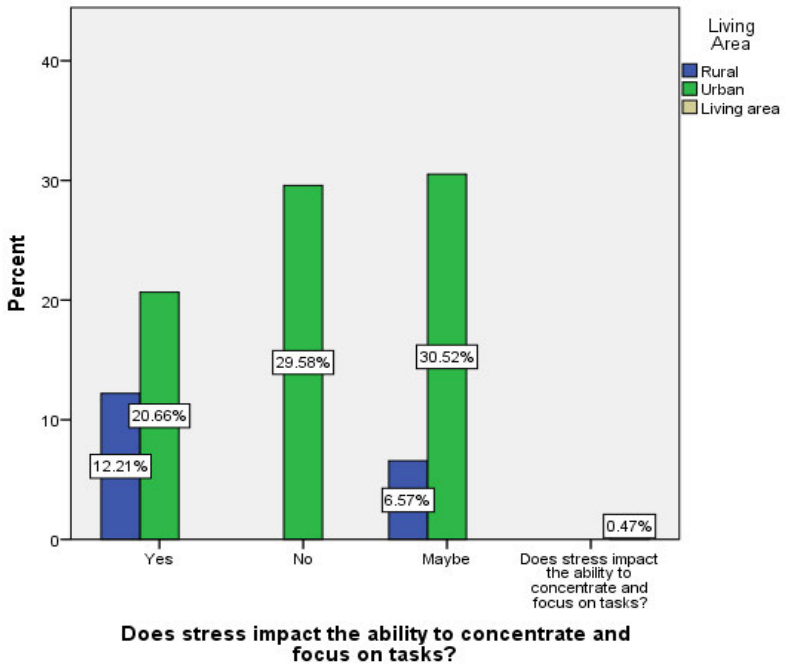

Figure 13: The comparison between living area and the opinion of the respondents on does stress impact the ability to concentrate and focus on task

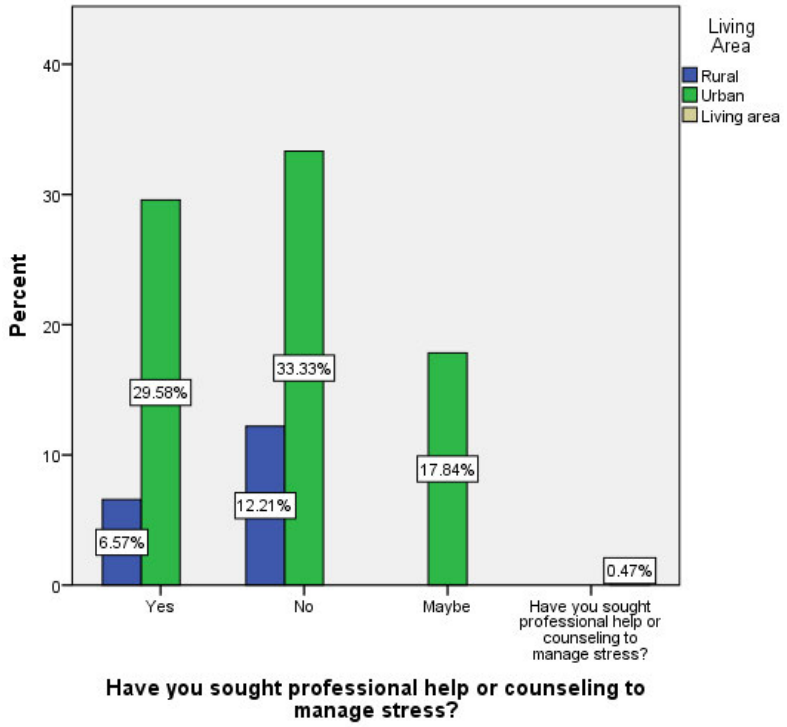

Figure 14: The comparison between living area and the opinion of the respondents on have you sought professional help or counselling to manage stress

Residential Area-Based Analysis

Differences based on living area were also explored. Rural respondents (12.21%) were more likely to affirm that stress impacts their concentration, while urban respondents (30.52%) expressed uncertainty ("maybe") (Figure 13). This could be due to differences in occupational pressures, social support systems or lifestyle pace.

When it comes to seeking professional help, both urban (33.33%) and rural (12.21%) respondents reported low usage rates (Figure 14), indicating a systemic gap in mental health

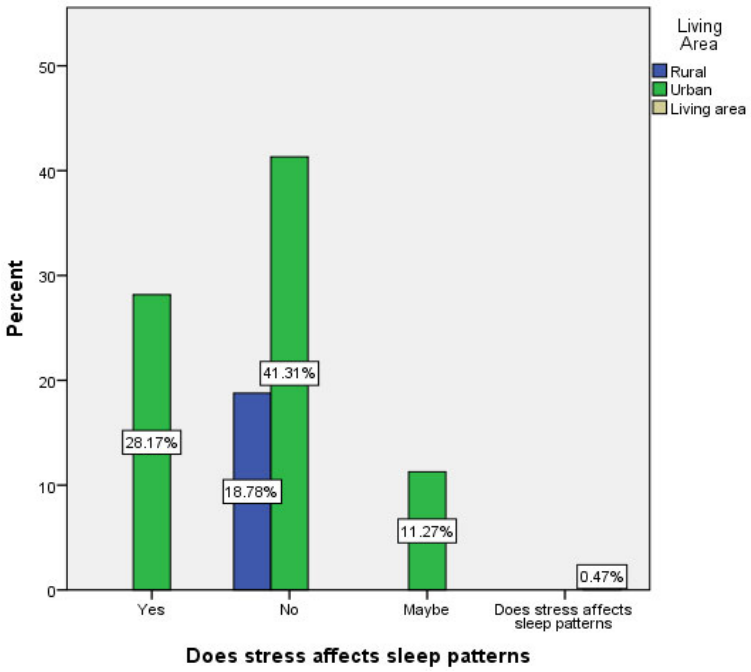

Figure 15: The comparison between living area and the opinion of the respondents on does stress affects sleep patterns

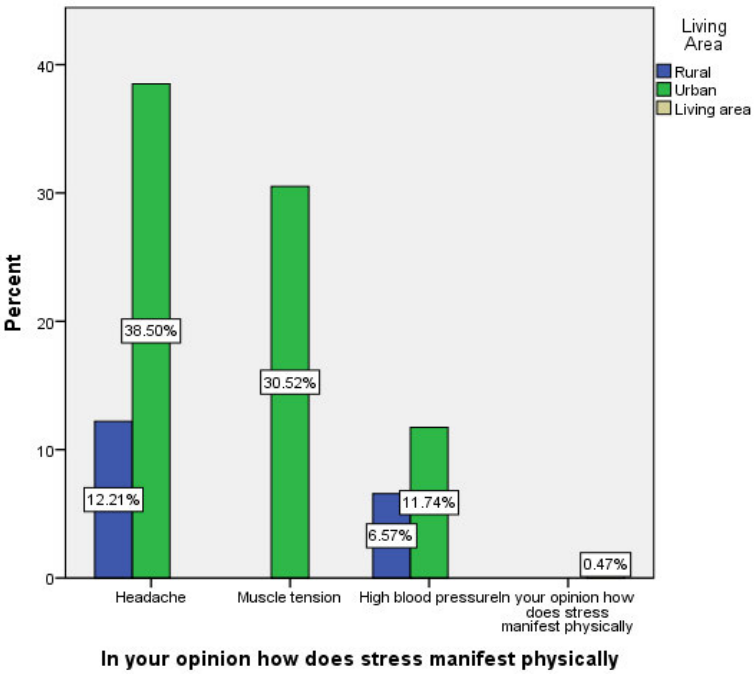

Figure 16: The comparison between living area and the opinion of the respondents on in your opinion how does stress manifest physically

service utilization irrespective of geographic location, although the reasons may vary-such as awareness, availability or stigma.

In terms of sleep, a higher percentage of rural respondents (18.76%) reported that stress did not affect their sleep compared to urban respondents (41.31%) (Figure 15), potentially reflecting a more balanced lifestyle or lower exposure to certain stressors in rural areas.

With respect to physical manifestations, both urban (38.50%) and rural (12.21%) respondents identified headaches as a common symptom (Figure 16). However, the higher percentage in urban areas reinforces the link between urban lifestyle and physical stress outcomes.

As for coping strategies, urban respondents preferred regular exercise (31.46%), while rural respondents leaned towards a balanced diet (12.21%)

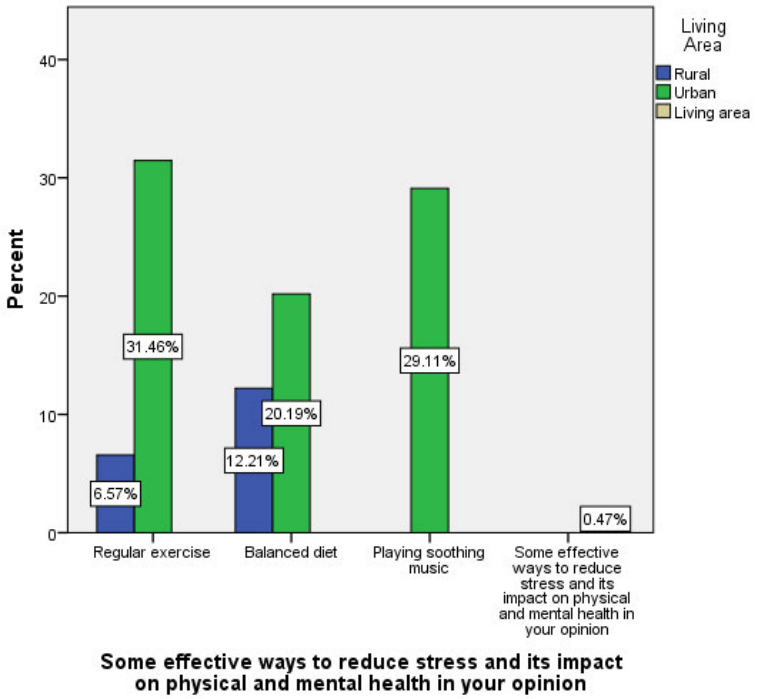

Figure 17: The comparison between living area and the opinion of the respondents on some effective ways to reduce stress and its impact on physical and mental health in your opinion

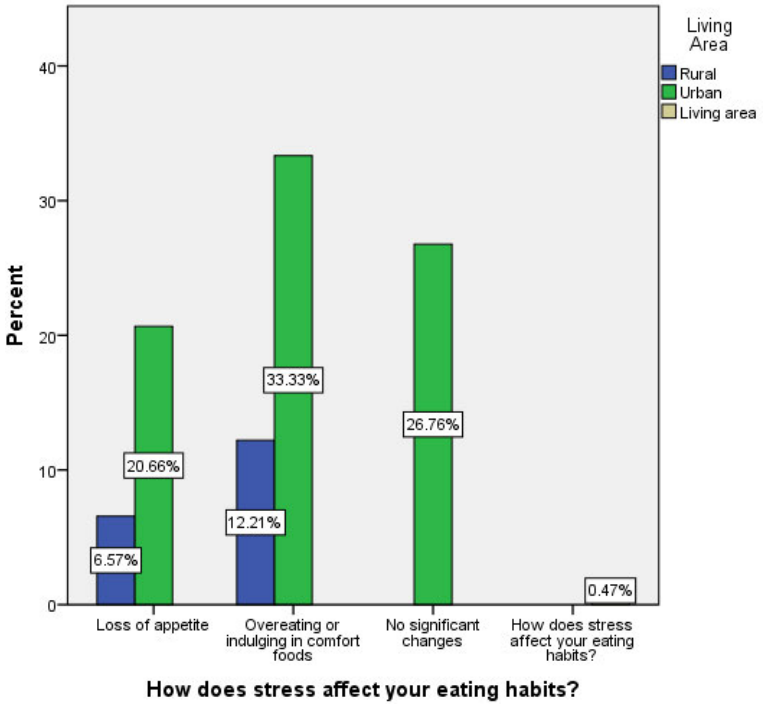

Figure 18: The comparison between living area and the opinion of the respondents on how does stress affects your eating habits.

(Figure 17). This might reflect differences in access to resources, awareness levels and lifestyle routines.

Urban respondents (33.33%) also reported more stress-induced overeating or comfort food consumption, in contrast to rural respondents (12.21%) (Figure 18), emphasizing the influence of environmental and cultural factors on stress-related eating habits.

Interestingly, rural respondents (18.78%) were more likely to agree with the effectiveness of mindfulness and meditation, while urban respondents (30.99%) remained neutral (Figure 19). A similar trend appeared regarding the importance of a healthy lifestyle, with rural respondents more inclined to agree and urban respondents remaining neutral (Figure 20). These

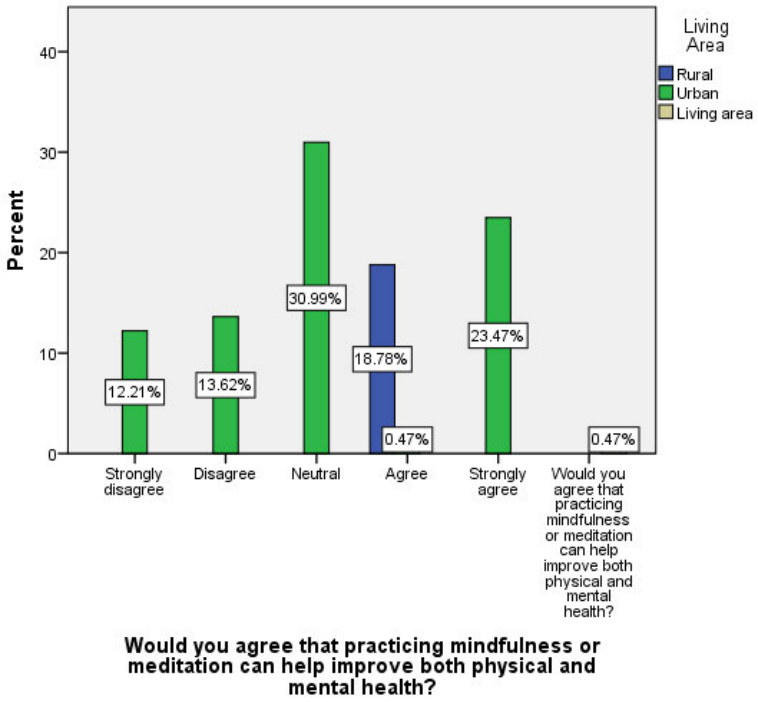

Figure 19: The comparison between living area and the opinion of the respondents on would you agree that practicing mindfulness or meditation can help improve both Physical and Mental Health

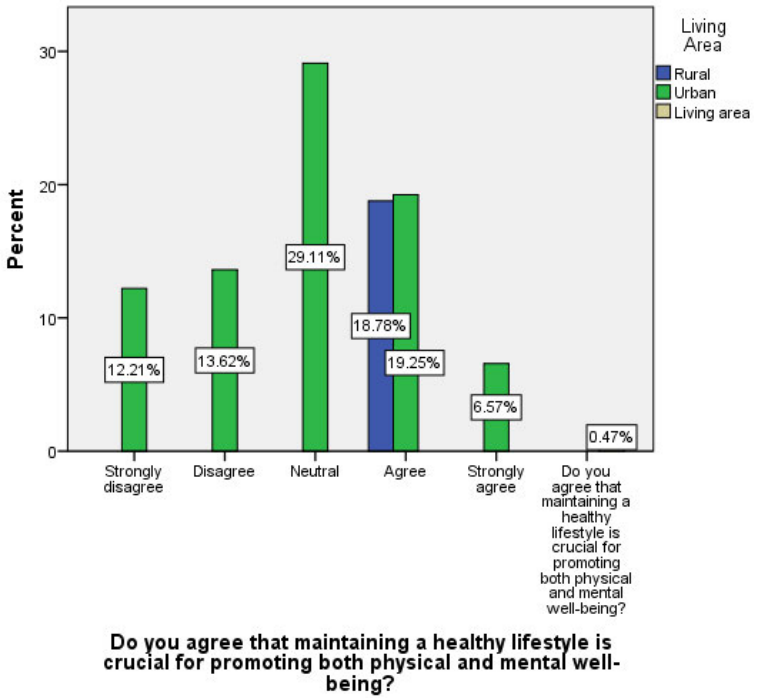

Figure 20: The comparison between living area and the opinion of the respondents on do you agree that maintaining a healthy lifestyle is crucial for promoting both physical and mental well being

observations suggest differing levels of belief or engagement with wellness practices across regions.

Statistical Significance and Hypothesis Testing

The Chi-square test results offer empirical support for the observed differences. There is a statistically significant relationship between gender and the perception of stress's impact on concentration (Figure 21), gender and seeking professional help (Figure 22) and gender and the effect of stress on sleep (Figure 23). In all three cases, the null hypothesis was rejected, indicating that gender significantly influences how individuals experience and respond to stress.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Does stress impact the ability to concentrate and focus on tasks?	213	100.0%	0	0.0%	213	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	229.992[a]	6	.000
Likelihood Ratio	29.992	6	.000
N of Valid Cases	213		

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is .00.

Figure 21: The chi Square test on gender compared to opinion of respondents on does stress impact the ability to concentrate and focus on task

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Have you sought professional help or counseling to manage stress?	213	100.0%	0	0.0%	213	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	375.917[a]	6	.000
Likelihood Ratio	222.154	6	.000
N of Valid Cases	213		

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is .00.

Figure 22: The chi Square test on gender compared to opinion of respondents on have you sought professional help or counselling to manage stress

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Does stress affects sleep patterns	213	100.0%	0	0.0%	213	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	363.744[a]	6	.000
Likelihood Ratio	202.350	6	.000
N of Valid Cases	213		

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is .00.

Figure 23: the chi Square test on gender compared to opinion of the respondents on does stress affects sleep patterns

CONCLUSIONS

The present study aimed to examine the multifaceted impact of stress on both physical and mental health among individuals residing in urban areas of Chennai. Using empirical data collected from 426 respondents through judgmental sampling, the research sheds light on the socio-demographic patterns, behavioral tendencies and psychological perceptions surrounding stress-related health outcomes.

The findings reveal that stress is a pervasive concern across different age groups, genders, occupations and educational backgrounds, although its manifestations and coping mechanisms vary significantly across these variables. Notably, gender played a significant role in shaping stress responses: male respondents more frequently reported seeking professional help, while female respondents showed higher instances of stress-induced changes in eating habits and emotional responses. Similarly, urban residents reported

a greater prevalence of stress-linked disruptions in sleep patterns, dietary behaviors and mental health symptoms such as anxiety and depression, suggesting a unique urban stress ecology characterized by fast-paced lifestyles, occupational pressure and limited recreational or emotional support networks.

The chi-square analysis further confirmed statistically significant relationships between gender and several key stress indicators, such as concentration levels, sleep patterns and attitudes toward seeking help. These insights highlight the need for tailored mental health interventions that consider gender-specific experiences and social contexts. Moreover, the high proportion of respondents who acknowledged the efficacy of stress management strategies such as regular exercise, balanced diets and mindfulness practices underscores the potential benefits of promoting preventive mental health awareness and behavioral modification programs.

However, the study also exposes critical gaps in the accessibility and normalization of mental health services, especially among certain demographics. The reluctance to seek professional help, particularly among women and rural dwellers, points to persistent stigma and cultural barriers that need to be addressed through policy advocacy and community-based education.

In conclusion, stress is not only a mental or emotional condition but a multidimensional public health concern that influences cognitive functioning, physical well-being and lifestyle behaviors. Addressing it requires an integrative approach that combines empirical evidence with culturally sensitive interventions, public health policy reform and community participation. Future studies may enhance these findings by adopting mixed-method research designs and incorporating clinical tools to deepen our understanding of how stress uniquely affects urban populations in the Indian context.

Limitations

The limitation of the study lies in the methodological and contextual depth of its data collection tools and sampling strategy. While the structured questionnaire provided quantifiable insights, it did not incorporate clinically validated diagnostic instruments such as the Perceived Stress Scale (PSS) or Beck Depression Inventory (BDI), which could have offered a more precise assessment of psychological conditions. Moreover, the research did not delve deeply into other psychosocial determinants like family environment, economic stressors, social support systems or occupational demands, all of which significantly influence stress perception and coping behaviors. The reliance on judgmental sampling, though effective for targeting relevant respondents, introduces a degree of subjectivity in participant selection and may have limited the diversity of perspectives captured. Furthermore, the exclusive use of quantitative tools restricted the exploration of nuanced personal experiences, cultural beliefs and emotional responses to stress, which qualitative methods such as interviews or narrative analysis might have revealed. As a result, the study's interpretation of stress and its health implications, while statistically valid, may lack the depth and richness needed for a fully holistic understanding.

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